

Global Wireless Data Radio Modem Market Size study & Forecast, by Product (General-Purpose Data Modem [Application: SCADA & Telemetry, Precision Farming] and UAV Drone Data Modem [Application: Precision Farming, Transportation]) by Operating Range and Regional Forecasts 2025–2035

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Abstracts

The Global Wireless Data Radio Modem Market is valued at approximately USD 0.58 billion in 2024 and is expected to grow at a CAGR of 3.82% over the forecast period 2025–2035. Wireless data radio modems are advanced communication devices used to transmit digital data between remote systems through radio waves. These modems enable secure, reliable, and long-range communication in industries where wired connectivity is either impractical or cost-prohibitive. Their use spans across applications such as SCADA (Supervisory Control and Data Acquisition), telemetry, precision farming, unmanned aerial vehicles (UAVs), and transportation systems. The rising need for robust wireless connectivity across industrial automation, smart agriculture, and remote monitoring solutions continues to drive market expansion. Furthermore, the growth of Industrial IoT (IIoT) and machine-to-machine (M2M) communication ecosystems has accelerated the adoption of wireless data modems as enterprises increasingly prioritize real-time data transfer and operational efficiency.

The escalating demand for seamless data communication in remote or harsh environments is one of the most significant forces driving this market's growth trajectory. SCADA and telemetry applications have become integral to the functioning of modern infrastructure, enabling industries to remotely manage assets, monitor critical parameters, and respond to system fluctuations with minimal latency. In agriculture, precision farming relies heavily on wireless data radio modems to collect and transmit

field data that supports irrigation control, soil management, and equipment tracking. Meanwhile, UAV and drone-based communication systems are redefining logistics, environmental monitoring, and defense operations, further strengthening the demand for compact, high-bandwidth modems with extended range and low power consumption. However, the market faces certain constraints such as spectrum limitations, regulatory hurdles, and potential signal interference in dense communication zones. Despite these challenges, the emergence of advanced modulation technologies and the gradual transition toward 5G-enabled communication are expected to unlock new opportunities for industry players in the coming decade.

The detailed segments and sub-segments included in the report are:

By Product:

General-Purpose Data Modem

Application: SCADA & Telemetry

Application: Precision Farming

UAV Drone Data Modem

Application: Precision Farming

Application: Transportation

By Operating Range:

Short Range

Long Range

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa**

General-Purpose Data Modems are Expected to Dominate the Market

General-purpose data modems are projected to hold the dominant share of the global wireless data radio modem market throughout the forecast period. These modems are widely used across SCADA and telemetry systems for industrial automation, smart grid control, and remote equipment monitoring. Their reliability, scalability, and compatibility with a wide array of industrial protocols make them a preferred choice for organizations seeking dependable long-distance data transmission solutions. The surge in smart city projects and the expansion of smart utility networks have further amplified the use of general-purpose modems in sectors such as energy, oil & gas, and water management. While UAV drone data modems are emerging as a dynamic segment due to increasing deployment in defense and logistics, general-purpose models continue to serve as the backbone of mission-critical communication networks, solidifying their leadership in the market.

UAV Drone Data Modems Lead in Revenue Contribution

In terms of revenue, UAV drone data modems currently lead the market, fueled by their widespread adoption in precision farming, defense surveillance, and unmanned transportation applications. These modems facilitate high-speed, low-latency communication between drones and control systems, ensuring stable data exchange even in challenging terrains. The transportation sector's rapid integration of UAVs for last-mile delivery, mapping, and infrastructure inspection has accelerated demand for drone-compatible wireless modems. Moreover, the defense industry's focus on autonomous systems and real-time situational awareness has intensified investment in high-performance, encrypted modem technology. Although general-purpose modems

dominate in volume, UAV-based solutions are driving value creation and innovation, representing the most lucrative growth avenue within the wireless data radio modem ecosystem.

The key regions analyzed for the Global Wireless Data Radio Modem Market include North America, Europe, Asia Pacific, Latin America, and the Middle East & Africa. North America held the largest market share in 2025, driven by robust infrastructure for industrial automation, a high concentration of defense and aerospace projects, and the widespread adoption of IoT-based monitoring systems. The United States remains a major contributor due to its early integration of advanced communication systems in transportation and agricultural sectors. Europe follows closely, with strong demand for UAV-based telemetry systems across countries like Germany, France, and the UK. Meanwhile, the Asia Pacific region is anticipated to register the fastest growth rate during the forecast period, underpinned by rapid industrial digitization in China and India, expanding agricultural technology adoption, and increasing investments in smart mobility projects. Latin America and the Middle East & Africa are expected to exhibit steady growth due to the gradual deployment of wireless communication solutions in resource exploration and infrastructure monitoring.

Major market players included in this report are:

Advantech B+B SmartWorx

Campbell Scientific, Inc.

CimTechniques, Inc.

Digi International Inc.

Encom Wireless Data Solutions

FreeWave Technologies, Inc.

Schneider Electric SE

Simrex Corporation

Arada Systems

Satel OY

Motorola Solutions, Inc.

Murata Manufacturing Co., Ltd.

Omnex Control Systems Inc.

GE MDS LLC

Microhard Systems Inc.

Global Wireless Data Radio Modem Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent to up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and

product offerings of key players. The detailed segments and sub-segments of the market are explained below:

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional-level analysis for each market segment.

Detailed analysis of the geographical landscape with country-level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of the competitive structure of the market.

Demand side and supply side analysis of the market.

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